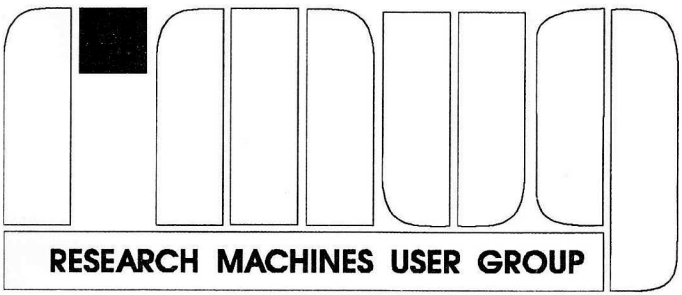
RM User

Volume 8:4
December 1993



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Row3	Sairoon	144cm	31kg	56cm	74cm
Row4	Christine	150cm	42kg	61cm	71cm
Row5	Wasim	140cm	44kg	67cm	70cm
Row6	Simon	143cm	32kg	71cm	70cm
Row7	John	156cm	36kg	63cm	67cm
Row8	Jo	150cm	41kg	67cm	69cm

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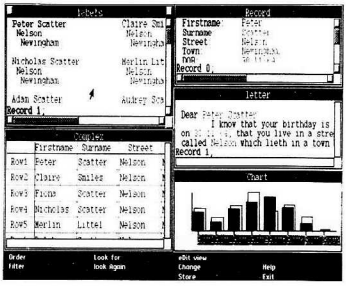

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HelpLine

The User Group exists to help its members use the computers which they have.

Many of you (about 20%) are home users of Nimbus computers and we would like to help you. Do please phone any of the people whose numbers are listed at the back of the magazine and we will do our best to help.

You may find that you have a problem which you feel is too trivial for Customer Support or you may have a problem with which they can't help, perhaps because you have a non-standard setup for your equipment or you are using third-party equipment. This is the time when we may be able to help.

Remember that you can telephone the User Group members in the evening or at weekends when RM is shut (and, of course, you are just bound to hit problems). Also, RM don't claim to have great knowledge of products which they don't produce such as Excel or PageMaker. They can tell you how to install the packages on their equipment and how to get started but they cannot be expected to give you in depth support on using the packages. We, on the other hand, can. Most of the people whose phone numbers are listed at the back are using a range of software which is probably the same as yours on a daily basis. We may have met exactly the problem you have just encountered.

If you are in difficulty, please feel free to ring anybody on the Committee (numbers at the back) and you may also phone Tim Phillips on 0284 706623 (home number).

It is a great help if you are having a problem doing something using your computer if you can be next to it when you phone because it may then be possible to talk through a solution over the phone.

If your problem is not urgent, or you think it may be difficult to explain over the phone, then do please write to the Editor with your query. I will either reply to you directly or pass your query on to a better person to solve it or publish your letter in the next magazine as a request for help.

If you have had a problem which you have solved for yourself then please share your knowledge; your solution is quite likely to be useful to someone else, even if you think it is trivial; remember that many of our members are new to using RM equipment.

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Deadlines for the next issues

RM User 8:5 ..... 14 January 1994
RM User 8:6 ..... 4 March 1994

The date shown above is the ***latest*** date for copy for the magazine. You will normally receive the magazine about 2-3 weeks after the date shown.

Missing a Magazine?

Back issues of the magazine are available from the editor. Write to RMUG, FREEPOST, London W12 0BR for more details.

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News and Editorial

The Training Weekend is over for another year. If you were able to attend then I hope that you found it useful; I always value the chance to meet other members and to learn more about the computers I work with. In the past it many people have seen the weekend as only suitable for people with networks but we are trying to make sure the weekend has something for everyone. For example, the sessions this year on Word, Excel and Access were among those aimed at any computer user, not just the network managers. If you've never been able to go in the past but feel that some kind of training is needed then I do recommend that you consider this for next year.

RM Direct! is a new, fast delivery service from Research Machines. It aims to make a range of consumable or other small items available at competitive prices for delivery on the next working day. As such it is very welcome. If you've not yet received a catalogue then phone 0235 826216 to ask for one. A nice touch is the free number for orders - you can fax orders to 0800 833872 or you can post orders to a Freepost address. Next time you need to order things like printer ribbons or inkjet cartridges you could do worse than trying RM.

I've just received the Winter catalogue from RM for accessories, peripherals and upgrades. It looks attractive and seems to contain all the information you will need in a reasonably clear format. One of its features is that it's printed on paper made from renewable forestry resources. This reflects a move by RM generally to make their business "greener". One of the comments I got in school when we got new computers last year was about how wasteful the packaging was. RM have now acted on this and are now using packaging made from recycled board and also internally recycling packaging (so if you get a computer back from service it is likely to come in a used box). This cuts costs and saves paper, both welcome objectives.

RM recently commissioned Nielsen Research to carry out a survey to find out what expectations businesses, colleges and universities had of the IT experience of school leavers who were joining them. Some of the results are to be expected - almost all respondents considered experience of computers to be important - but some of the results will be disappointing to some schools (but not those with RM equipment!) 83% of respondents felt that it was important for pupils to have had experience of PC compatible systems whereas 89% felt that it was not important to have had experience with Acorn computers. This is perhaps not surprising given that 92% use PC systems to a significant degree but only 6% use Acorn systems (and no establishment used Acorn systems most of the time). It's probably not helpful to put in any more figures but the essence of the report is what RM have said for a long time - most businesses and colleges use PCs, many of them use Windows and the use of Windows is increasing so it makes sense for pupils to gain experience in this environment. Of course, a pupil entering school at 11 and expecting to go on to HE will not actually start

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looking for a job for nearly 10 years and much could change in that time. In the past 10 years although there have been huge changes in computers the PC has stayed dominant throughout and is quite likely to still be dominant in 10 years. More details can be obtained from Market Research Solutions Ltd on 0865 716020.

Primary schools are also seen as important by RM and to help them the company will be holding a series of Road Shows in the new year so that heads, governors and IT teachers can find out more information. They will be held at various locations around the country and, in recognition of the fact that many primary teachers can not easily take time out of school, they will be after school hours. For more information contact the school sales desk on 0235 826868. (It is good of RM to run shows after school but, yet again, it is an example of the amount of work teachers have to do outside their "short" working hours!)

I've been looking at a program called AllType which allows you to take one type of scalable font and convert it to another. I started with this in the hopes of adding some extra fonts to the limited set which came with Micrografx Draw on my network. My first attempt failed (I got the fonts in the right format in the fonts directory but Draw wouldn't look at them!) I then started investigating and found that any full Micrografx product has an install program with a section which allows you to add new fonts. RM don't supply the master discs for Draw so I don't know if this comes with the same installer but Charisma and Designer do have the install routine. Running this was straightforward and so in seconds I had some new fonts in Draw which makes it much more useful. I have also been able to take some public domain fonts designed for use with Adobe Type Manager and convert them for use in Windows 3.0 with both a DeskJet 500 printer and a Laserjet III compatible printer. If you are using either Draw or an HP printer and want some scalable fonts then AllType is well worth considering. AllType is available for £49 from LTS at Haydon House, Alcester Road, Studley, Warwickshire B80 7AN Tel: 0386 792617. Incidentally, if your copy of Draw doesn't have any scalable fonts then it may be because your server didn't have them installed (they weren't on any of my servers). If this is the case then contact RM and ask for the Micrografx scalable fonts.

Borealis is a painting program for the PC186 which has been around for some time and allows excellent images to be produced. I am pleased to report that a new version for 286 and above computers is now available. It supports up to 256 colours in all available resolutions and is designed to be simple to use but still have many powerful features. The price depends on the licence you require and ranges from £95 for one copy to £375 for an unrestricted site licence. For more details, contact Aurora Educational Software at 5 Hawkwood Mount, Springfield, London E5 9EQ Tel: 081 806 1752

Attica is a company which has long been associated with RM computers. They now have an extensive range of CD ROMs available for education. One of their latest is the Interactive Periodic Table. This allows you to search for

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information about any of the elements, including physical and chemical properties, uses and history. It is also possible to watch video clips of a number of experiments being performed and to listen to "relevant" music and poetry. I'm not absolutely sure about the value of the sound but the rest of it seems good. Attica also supply the Daily Telegraph on CD ROM. In many ways it's like the other newspaper CD ROMs which are available but its big plus point is that it runs in Windows so this should make it easier to get information from the paper into research work etc being carried out by pupils; it's also cheaper than the other papers at just £125 for the year's subscription. A nice feature is the ability to get a list of articles in any one day's paper. The first release of the Guardian on CD ROM allowed you to see a facsimile of the front page of each issue but this looks more useful. National Curriculum history rightly places emphasis on research using primary sources and World War II Archives is a disc which enables this to happen. The disc contains data from the Imperial War Museum, the BBC, Hulton Deutsch and government archives, including cabinet papers and provides access either via a time-line or from a standard alphabetical search.

Twentieth Century Art is a new disc based on pictures in the Tate Gallery. If you can't easily get to the Tate then this is the best way to find out what's there. The disc not only gives images but text and sound descriptions of the artistic styles together with biographies of the artists and details of how they have been influenced by time place and culture. Due to be released this month is the Viking Opera Guide. I have to admit to knowing nothing about opera so maybe this is the disc I should get! It contains over three hours of sound clips, hundreds of pictures, maps showing the location of places referred to in the operas, text giving information both about the opera, its plot and characters and the composer. It sounds fascinating - for more details of this and the other Attica CD ROMs, contact Attica at Unit Two, Kings Meadow, Ferry Hinksey Road, Oxford OX2 0DP Tel: 0865 791346.

I went to one of the launches of Microsoft Office 4 just after the Training Weekend. Office 4 comprises Word 6, Excel 5, PowerPoint 4 with Windows 3.11 an almost essential component. (It's number rather spoils the pattern and sadly there is nothing with version 2; but Access 1.1 brings up the end!) The new feature of the first two applications is called Intellisense and you've probably seen Microsoft's major advertising campaign for this. Essentially, part of the software is constantly monitoring what you do and trying to decide if you have either done it wrongly or could have done it better. This includes such things as checking for words like *teh* or *MIcrosoft* and automatically correcting them together with all sorts of help with formatting and other regularly performed tasks. As with Word 2, Microsoft are really concentrating on the usability of their products. There are also things like a check to see if you always click File Save to save your work. If so then you are offered the advice that you can also click the File Save icon or press Shift F12. The system does this intelligently - if you press Alt FS then it offers the key stroke alternative, if you use the mouse then it offers the

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mouse short cut. There are many other things that it can do and you can tell it to shut up if you find it irritating!

I like some of the features in Word (I frequently make simple spelling mistakes, not because I can't spell but because I can't type) so help with these could be welcome but from an educational point of view I'm not so sure about other features. For example, even now with Excel it is possible to put in any numbers and get a graph which is totally meaningless. If we provide ever more powerful tools to pupils then there is the risk that they will do ever more sophisticated things with numbers without having any concept of what is actually happening to produce those results. I don't want to appear Luddite but I suppose that I'm saying that we need to teach pupils more about what the computer is doing so that they can make sensible judgements about what to use and how. After all, we don't let them loose in a workshop with a power saw; a spreadsheet is not dangerous in the same way but in a world where we are bombarded with graphs and figures I think it is important that we make sure that pupils know what is going on and how.

Windows 3.11 is the latest release of Windows. It actually carries the tag "for Workgroups" but you can install it on a standalone machine and Microsoft encourage you to do this. It brings major increases in speed for normal use because it has significantly faster disc access routines built in and if you are using it on a network then it uses much less conventional memory, allowing you to run bigger DOS programs. If you have a registered copy of Windows then you should have received an upgrade offer from Microsoft by now. I've just ordered my copy and I'll let you know in the next issue how I get on with it.

Windows NT is the "other" version of Windows that's been recently released but this is not really for normal users. I've just received an offer to buy the Advanced Server version at the trial price of £100; unfortunately I don't have a machine I could try it on (it needs at least 16Mb of memory and the only computers I have with that spec are my network servers). I'm not sure whether it's desperation that's making Microsoft make offers like this or an attempt to beat the opposition into the ground. RM are not yet directly supporting NT but if future network products are based on Microsoft networks then they obviously will be.

Still no news on a date for RM Net LM version 2. It was on show at the Training Weekend and it seemed fine. At the recent seminar programme it was stated that the system is now in beta testing and will be released when it's ready. The most important feature for most users will be the introduction of Windows 3.1. If you have bought your network stations since the summer of 1992 then you are already licensed to run this; if you want to get it working now then you could look on the bulletin board for some suggestions as to how it can be made to work. Most of them involve using DOS Logon and then running Windows. In some ways this is a retrograde step but it may give you a more stable environment than Windows 3.0 -remember, however, that this is not supported by RM.

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Impositions for Everyone

Jeff Moon

Last year a friend of mine was lucky enough to go for a holiday to the USA. While he was there he was obviously suffering withdrawal symptoms from his computer and had strayed into a bookstore looking for relief from this increasing problem. There on the top shelf among the other magazines dedicated to those with strange passions he found what he had been looking for - a Windows magazine. Not recognising, it his natural curiosity got the better of him and he dipped into his purse and hurried away to the darkness and seclusion of his motel room. By the time he returned to England it was well thumbed and it was in this tattered condition that he gave it to me. The magazine in question was *Windows Sources*.

Being an American publication I was a bit sceptical at first but I was well rewarded with the contents. Loads of reviews, loads of tips and advice and loads and loads of little adverts in the back. One of those ads caught my eye - something like ...It took 3 months to research this book and 3 minutes to print it. I faxed off my order together with my Visa card number. After a couple of weeks the package arrived and all was then fully revealed - ClickBook - an imposition program but with a difference.

If let's say you wanted to create an 8 page A5 (folded A4) booklet then you would, probably as I would, create 8 A5 pages paste them onto 4 separate sheets of A4 so that pages 1 and 8 were together then 2 and 7 and so on. ClickBook's approach is much simpler. You create the pages in ANY Windows application, Write, Pagemaker, Coreldraw 4 etc. In return ClickBook will produce booklets in any of the following ways, or combinations of these:

- As a booklet of any size
- As a brochure or leaflet
- With several pages on each sheet of paper

For example, for an artist, as a 'proof sheet' of thumbnail graphics or for an analysts, to compare several tables or spreadsheets

- Double or single sided
- Reduced in size

For example, to fit a large spreadsheet on one page.

The following templates are supplied.

- Side-by-side (folded)
- Flip book (folded)
- Side-by-side tiled
- Four-up flip book (folded)
- Four-up book (folded)
- Four-up tiled, portrait
- Four-up tiled, landscape
- Address book (folded)
- Wallet book (folded)
- Double-sided, portrait
- Double-sided, landscape
- Tri-fold brochure

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- Tri-flip brochure
- Thumbnail (tiled)

Various organiser formats:

- Day Runner classic (cut)
- ClickBook classic (cut)
- Day-Timer pocket size (cut)
- Day-Timer desk size (cut)
- Day-Timer compact size (cut)

But since you can create your own layouts the variety is endless.

ClickBook takes the output from your application program's print command - exactly what you would print if you were not using ClickBook - and shrinks and rearranges the pages to fit the layout that you have chosen.

ClickBook gives you instructions at each step of the way to ensure that the back sides are printed correctly relative to the front sides, and after that you cut and assemble the book, the pages come out in the right order.

Installation is also stress free. The first part of the installation puts the main program into a directory and puts an icon in a window for ClickBook. Once there you are invited to run ClickBook to set up printers of your own. Basically what this does is to use the current printer driver and create a special ClickBook printer driver which is added to the list of printers in the Control Panel - an extra one is created for very type of printer you wish to set-up. It doesn't alter those that you already have so you needn't lose your favourite settings. During the set-up the program prints out test pages for you to check against the possibilities shown on the screen. You check off what has been printed out and the program configures itself from these responses. It even asks you to reassemble the sheets and send them through the printer for the second pass to ensure that the reverse output is in the correct orientation.

In use ClickBook treats you like a child taking you through the printing process carefully and methodically. As in the installation, while it prints it send out an instruction sheet which tells you how to arrange the sheets for their second pass through the printer - you can't go wrong. Printing speed is quite good on some machines but slow on others.

If you produce a lot of booklets or odd formats then ClickBook is for you. It is easy to use and is well recommended. The last thing in its favour is its price - $49.95 plus post and packing which comes out about $57. This was converted on my Visa card to £37 on the day.

From: BookMaker Corporation, 625 Emerson St. Suite 200, Palo Alto, CA 94301 Tel: (0101) 415-617-1101, Fax: (0101) 415-323-0108

Windows Sources - A Ziff Davies Magazine - is available from newsagents at £1.95 but it needs to be ordered. It does not appear on the shelves locally.

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Micro Mart

Wanted

Elizabethan Court for Nimbus 186 (pub Longmans)

Contact

Bob Sear, Sedgehill School, London, SE6 3QW Tel: 081 698 8911

Wanted

Has anyone come across any of the following types of program that may run under Windows 3.1?

- Tree of Knowledge (Used to make Keys in Classification and Identification Charts - dichotomous keys?)
- Cloze procedures
- Hangman-preferably graphical
- Word search maker
- Crossword maker
- Word maze maker

Contact

Jeff Moon, 25 Shotley Gardens, Gateshead, Tyne & Wear, NE9 5DP.

Wanted

Do you have any software for a 480z that you no longer want or can you help in setting up a 480z?

Contact

Dee Rodriques at St John's School, London SW9 Tel: 071 274 4847.

For sale

The following PC186 components are available due to spring (December?) clean:

- Cumana SCSI Interface card (requires software from Cumana) £10.
- Full height 3.5" floppy disc drive (dark grey) £10.

Please add £2.50 p&p per order.

Wanted

- CorelDraw 2 and any software that will run on a PC186.

Please contact Stephen Sharrad, 10 Gainsborough Hill, Henley-On-Thames, Oxon RG9 1ST. Tel: 0491 577149.

Kodak Photo CD - a correction

The following table was accidentally omitted from the October issue. Apologies for the confusion.

As you can see the one hundred available spaces are soon filled. Why is this? Well the reason is that Photo CD holds not one copy of the image but five, taking about 4.5Mb per picture. These five copies are called resolutions and the table below shows what resolutions are used in the original Photo CD format.

BASE/16	BASE/4	BASE	BASE X4	BASE X16
Thumbnail		TV	High Definition TV	Photographic
128 lines	256 lines	512 lines	1024 lines	2048 lines
192 pixels	384 pixels	768 pixels	1536 pixels	3072 pixels

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AMIGA - AMIGO?

Jeff Moon

"Please Sir, Do you think...?" If there's one phrase that can bring me out in a cold sweat, that is it!

Now I've always been a sucker for a pretty face and this young lady certainly smiled beguilingly. Nevertheless I should have remembered the old adage. Dealings with women cost you either your time, your money or usually your sanity. These being consumed in inverse proportion the original request.

However I digress. Basically the problem was that she wanted to do some word-processing at home but she didn't have a computer. Her younger brother had an Amiga but no printer. I suppose I could have loaned her a Z88 and then converted the uploaded text. But this was a project that I had considered for some time and this was an obvious opportunity to give it a whirl.

My son Steve has had an Amiga for about 2 years now and has kept virtually all the magazines and freebie software that he has bought. Among these freebies was a word processor called Scribble and a copy of a database called Prodata. I knew that the Amiga could read and write PC (720k) discs but there were no freebies in sight to do this. So I scanned the magazine shareware adverts and found Amiga<>PC - a shareware disc from Valley PD. This contained a nice version of Messy-SID the disc utility I was looking for. I faxed off my order with my VISA number and the following day (Yes, next day service!) I was in business.

Scribble although cheap also has one other advantage. It saves text as plain ASCII and it also allows for CR and LF (as in the PC) at the ends of lines as opposed to just CR (on the BBC). It can do a search and replace, you can set up pages with margins page numbering etc. However if you had been bold enough to send off £7.99 you could have obtained a full manual and a supplementary disc which contains a Dictionary and Thesaurus.

Prodata is another little gem considering I was getting it for nowt. It will sort print labels just like most databases. It too has the advantage that data can be EXPORTed as plain text. The bonus is that it can IMPORT data in plain text and in Comma/Tab Separated Format, with or without quotes. This of course means that you can import data that has been produced in a word processor e.g. Scribble. This can be quite time saving for a large number of records. It also means that if you want to do some alterations you have a backup copy of the data should anything go wrong. The text of course could come from other sources and within the context of this article it can be the exported data from a PC database or spreadsheet which has been ported across.

In use everything is straightforward. Run Workbench as normal. Then insert your disc containing Scribble or better still copy Scribble on to a Workbench disc. Type away saving your work regularly to disc. When complete and the transfer is imminent save your work to the RAM DISK on the Amiga. This is OK using an Amiga with a 512k upgrade. What it would be like

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on a machine without an upgrade I cannot say. However I would suspect that they only problem would be that the amount of text transferable would be a lot less. It may mean that when running the conversion it may not be possible to save the text to RAM DISK at all. This would not cause any major problems but is a bit more fiddly. Exit the word processor and insert the PC<>Amiga disc. Call up the appropriate program.

When you run PC<>Amiga and then Messy-SID you are presented with a split screen. Each half is used to display the contents of a device. When using the RAM DISK click on the box below the left hand side of the screen marked RAM. Replace the PC<>Amiga Disc with a MSDOS formatted disc and click the box below the right hand side of the screen labelled DF0. Select the file(s) you wish to copy from the RAM DISK and then click GO. The files are transferred.

This of course was not as straightforward as the young lady would like but after a couple of tries, some more detailed instructions (line by line) and a phone call we got the job done.

The converted file being plain ASCII loaded into Windows no problem at all and our young lady eventually left with her printouts.

A slap on the back and a couple of beers were the order of the day. Next time however I think that I may have to be a lot more self-willed and less of a sucker to smiles.

Super Head of Info Tech had done it again.

Does anyone know of a freebie spreadsheet for the Amiga?? To be truly useful it should have some way of exporting its data as text in either comma or tab separated column values.

Amiga Format Magazine Monthly £3.25 with the freebie discs. Valley PD (they advertise regularly in Amiga Format and other Amiga Magazines) each disc £2 + 50p p&p

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Quite a few pupils have Amiga computers at home and use them simply for playing games. They find that they cannot do any "serious" work because they don't have a printer at home and they can't put their Amiga discs into a PC at school. I hope that this article will show that it's acutally quite easy to get data from an Amiga to a PC. Incidentally, artwork created on an Amiga can also be read by a PC if you have a program like Deluxe Paint on both of them. Alternatively, if the Amiga is used to write its pictures to an IBM format disc then a program like PaintShop Pro can read the Amiga format files and write tham as BMP files for Paintbrush.

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Illogical Drives!

One of the more confusing aspects of networks is the way one disc drive in the server becomes lots of discs at a station (or even on the server when in standalone mode) For example, a Net 3.1 server normally has one hard disc called C: but when you log on as NETMGR you get discs M:, N:, P: and Q: If you log on as a normal user then you get all these discs apart from M: but the N: disc does not contain the same as the managers' N: drive. Why?

A network server makes available parts of its hard disc by sharing certain areas (or offering them; the two words really mean the same thing.) You will find two files in the manager's N:, one called general.shr and one called offers. You should *never* make copies of these files that a normal user might be able to see or access. These list the resources which are available and contain lines like:

share s128=c:\mgr p0987 /rwcda

This tells the server when it starts that the directory c:\mgr should be made available to a network user. The user will ask for it by the name s128 and will give the password p0987. If this happens then that user should be allowed to read, write, create and change the attributes for files in that directory.

How do you ask for that resource? At a station you type

use G: \\serverx1\s128 p0987

(assuming that your server is called serverx1). This tells the network software to ask the named server for the resource s128 and to give the password p0987. If the server says "yes" then your station then acquires a drive G: which points to this resource. Of course, you don't have to put G:, you could put any valid drive letter and this is done automatically for you by the program called (X)netlink when you log on. It looks in the user database (the file called users.net) to see what drives a particular user should have access to and what short names and passwords to use. Once you have logged on, a piece of the network software called the re-director takes care of passing requests for data which is not on a local drive to the network server. Your application does not have to know when it is loading a file whether drive G: is a hard disc, floppy disc or some network resource.

Note that because it would be easy to connect to any share on the server the actual names and passwords used are changed every time you run (X)NETMAN and they are longer than those used here. You should make sure, however, that no user can either see the special files in your directory or can get to the server to change the names of the shares.

When you log onto the server in standalone mode, the start up program runs a program called subst which makes the system pretend to have the network connections you would normally have. If you type SUBST at a prompt on the server then you will see a list of the drive substitutions which have taken place. Subst does not know about network shares so does not make the drives P: and Q: read-only, allowing you to save files on these drives. This is why you sometimes have to install software directly on the server.

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Data in the Balance

Jeff Moon

One afternoon last term a 'bright young thing' gaily flounced into the staffroom and announced, with quite child like naiveté, that one of the really fun things about being a teacher in modern times was that there was never a dull moment. I am sure there is one of those characters in every staffroom and if it did nothing else it certainly lightened the mood.

One of those 'never so dull moments' came a couple of months later when my Head of Department came in and asked me how were we fulfilling the requirements for capturing and using data.

Now when I am asked questions like that it usually means that someone somewhere has an 'initiative' in his pocket and that means extra cash. So I give him a shrug of the shoulders and persuade him that whatever we are doing is insufficient and that I could use all the extra cash I could get.

Most times you know that this conversation gets you nowhere and its just an excuse for the HOD to shake his feathers and pretend that he's doing a good job. But this was one of those occasions when if you had put money on it then you would have lost. Just like the genie in the bottle the HOD came up trumps and yours truly was showered with sensors and a Logit. Not only that but bits of software to connect it to a BBC and to a 186 station via the AUX socket. Cor blimey just like Christmas I thought. The next few days saw various members of the department wandering around like water diviners in an apparent daze measuring temperatures and light levels. We also got a heart monitor. However the interface for this bit of kit has yet to arrive. "Oh dear me what a calamity." could be heard wailing round the department. "I was really looking forward to running up and downstairs to try that one out!!!" I suppose I will be able to find some unsuspecting child to be a guinea pig for that one when the other bits arrive. I am sure that I can persuade him that running up a few flights of stairs is better than doing some 'lines'.

The software is good, allowing the Logit to be programmed for date and time. Duration and frequency of samples can also be set. Even more useful however is the fact that the software will save its data in ASCII form! If you haven't already grasped the significance of that little offering it means that the data recorded by the Logit and transferred to the Nimbus can be loaded into another package such as Excel. It could be loaded into a word processor or DTP package and combined with information including graphs and flowcharts from other sources. Now that's what I call IT.

We had already been doing something like this for some time but just using a BBC and an Ohaus electronic balance. When we first bought the balance it was supplied with a program which could be used with the Beeb to display, in large letters, the reading on the balance. It could also record data automatically at different time lapses or at user command. This data could also be displayed in a limited but nevertheless useful form. Feeling this to be a bit limited and feeling a bit bored one day

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I altered the program to save the data as ASCII for use in other areas.

After the initial euphoria of the Logit arriving I wondered whether Ohaus produced the software for the Nimbus. Enquiries at Ohaus revealed that they did indeed market this software and it also came with a connecting lead. They apparently don't do a version that runs under Windows but as you will see this is no great loss. As luck would have it the Nimbus software was simply a ported Beeb version and the conversion was relatively straightforward. The listing for changes are given later on in this article.

In use the equipment is very simple. Connect the balance, run the software, select Tabular display from the first menu and manual input select from the second menu and that's it. Press SPACE every time you want to record data from the balance - which by the way waits until a steady reading is given before committing itself - press F when you're finished and then S to save. What more simple set-up could you ask for? Saving the data is actually two saves. One is the program's original way and secondly is my modification in ASCII form. I didn't bother to alter the programs own save routine as this would have meant altering the load routine as well and quite frankly I couldn't see the point. KISS has always been a watchword of mine. It also means that the ASCII data can be altered without the program data being affected.

OK so you can save the data as ASCII so what! Well as I already mentioned if the ASCII data is loaded into Excel you can analyse it quite easily(?). Well, easily is a bit premature. To do the job properly you need a set of Macros supplied as shareware from Omicron. One of these is a utility that allows Excel to create frequency histograms. It works on both version 2 and version 3 of Excel and is very useful for grouping information being ideally suited for data showing continuous variation - weights of peanuts for example. Load this macro from the menu bar in Excel and then block the column of figures that you want to analyse. The macro asks for the maximum and minimum values that you wish to use plus the 'class' division values and then goes about doing its calculations. It stores the results in another part of the macro sheet which you then have to paste into the chart drawing section. Not too much hassle but not quite as easy as version 4 of Excel if you're lucky enough to have it. Figure 1 shows the results from weighing 100 peanuts. This shows quite clearly patterns of variation and allows children to capture data and convert it into a graphic form. In classroom use however I always insist on seeing that the pupils can draw a similar histogram themselves without the computer before I allow them to use the equipment. It sounds mean but it's the process not the end product which is important.

Contact Omicron Systems Limited 45 Blenheim Crescent Leigh on Sea Essex SS9 3DT for details of the Excel macros and their extensive range of Windows sharewe

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Changes to Program called "OHAUS.BBC"

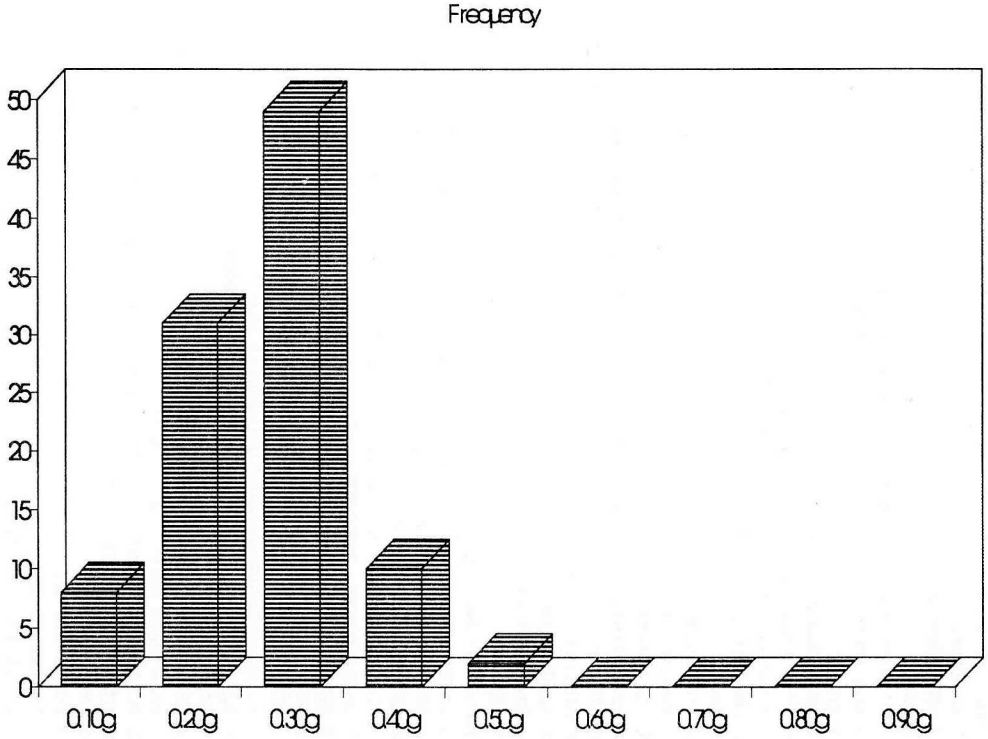
```
1600 REM Data directory path 1700 $&800="N:":REM IF STANDALONE
$&800="\"
```

Changes to the Program called "OH1.BBC"

```
2130 DEFPROCSAVE 2135 PROCJIF 2140 VDU12 2150 PROCD(3,2,"Saving File
'"+$(M%+408)+"'",1) 2160 ON ERROR GOTO 2240 2180 C=os:$C="SAVE
"+$&800+$(M%+408)+".D 1200+1E0"
3000 DEFPROCJIF
3005 ON ERROR END:REPORT
3010 VDU12
3015 FILE%=OPENOUT ($&800+$(M%+408)+".XLD")
3020 REM PROCD(3,2,"SAVING FILE '"+$(M%+408),1)
3025 PRINT''
3030 ON ERROR END: REPORT:REM
3040 PR$="DATA FROM OHAUS BALANCE"
3050 FORJ=1TOLEN (PR$): BPUT#FILE%, ASC(MID$( PR$,J,1)):NEXT:
BPUT#FILE%,13 :BPUT#FILE%,10
3066 K%=0
3070 FORI%=1TO?M%
3080 PROCNB(I%+K%)
3090  IF I%+K%>?M% THEN 3120
3100  PR$=STR$(I%+K%)+CHR$(9)+V$: REM RIGHT$(V$,LEN(V$)-1)
3105  FOR J=1TO LEN(PR$):BPUT#FIL E%,A SC(MID$(PR$,J,1)):NEXT:
BPUT#FILE%,13:BPUT#FILE%,10
3120 NEXT:PRINT:PRINT''
3122 CLOSE#FILE%
3130 ENDPROC
```

Changes to the Program called "OH4.BBC"

```
1120 DEFPROCload(FL$) 1130 OSCLI"LOAD "+$&800+FL$+" 1200"
2205 IF ?M%>100 THEN CLS:PROCD(8,5,"Maximum Number",1) :PROCD(8,8,"of
Readings Taken",1):PROCD(5,12,"Press SPACE to
continue",1):?M%=100:REPEAT UNTIL GET=32:GOTO 1780
4110 DEFPROCSAVE: PROCJIF
9000 DEFPROCJIF
9010 ON ERROR END:REPORT
9020 VDU12
9030 FILE%=OPENOUT($&800+$(M%+408)+".XLD")
9040 REM PROCD(3,2,"SAVING FILE '"+$(M%+408),1)
9050 PRINT'
9060 ON ERROR END:REPORT:REM
9070 PR$="DATA FROM OHAUS BALANCE"
9080 FORJ=1TOLEN(PR$):BPUT#FILE%,ASC(MID$(PR$,J,1)):NEXT:
BPUT#FILE%,13:BPUT#FILE%,10
9090 K%=0
9100 FORI%=1TO?M%
9110 PROCNB(I%+K%)
9120 IF I%+K%>?M% THEN9150
9130 PR$=STR$(I%+K%)+CHR$(9)+V$
9140 FOR J=1TO LEN(PR$):BPUT#FILE%,ASC(MID$(PR$,J,1)):NEXT:
BPUT#FILE%,13:BPUT#FILE%,10 9150 NEXT:PRINT:PRINT''
9160 CLOSE#FILE%
9170 ENDPROC
```



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Shop Talk

David Palmer

The weather has turned colder and we have moved the sheep off the upper 40 acre field ... sorry, . . . wrong column ... wishful thinking . . have you seen the breath-test program? You have to blow into the floppy disc slot and you get an on-screen analysis of how close people would (or wouldn't) like to be. Sounds really useful! I have also heard that there is a gang-show in Word for Windows 6 that features a gang of little animated Microsoft men doing battle with a Word Perfect dragon. My informant says that it is invoked through a macro - but I don't yet know which macro it is. There was a note in one of the Windows magazines that you could download a screen saver from Compuserve which featured Bill Gates coming down the other side of the screen in a window (har har) cleaners' cradle and cleaning the inside of the monitor. I tried to download it but when I got there the cupboard was bare - presumably Microsoft's lawyers got there first. (*I have the screen saver - send me a disc if you would like a copy or download it from the bulletin board but note that it only works with Windows 3.1 -Editor*) I could actually use it because some of my new monitors have a pattern on the screen as if there had been a plastic film over the screen which left an indelible residue. It is more noticeable with the monitor turned off and RM say they will replace them but I was curious as to how widespread the problem was. I am now using Lanman 2.1 and in some ways it is very good but there are still a few dark corners. I cannot get anything to run from Applications Manager - first I get an "addpath too long message" then I get a lot of egg-timer then an out-of-memory message and this is on a 486 with 4M of RAM. When I check on About it tells me that the machine is down to something like 40K free. This is trying to run Paint.exe the old Windows 2 black and white program which has some nice facilities that didn't make it onto Paintbrush. It runs fine from its own exe file but I can't attach it to an MTSL script.I can't get Paintbrush to print in colour at the moment on my Kodak Diconix printer. Other programs - like Word for Windows - can print in colour but when I import, by any means, a paintbrush file it won't appear on the printout. I know I have got around this in the past by taking the image into Paint Shop Pro and changing the file type until I found one which Word liked. Sadly, as with other work-arounds, I didn't make notes on it and I can't remember which format works. Also I have about 200 students who want to print in colour so multi-step procedures are not what I need. I am also baffled by the icons on the admin desktop for monitoring which seem absolutely useless. Have you tried doing List Shares? When I do it I get any empty file but when I do Net Admin on the server I see at least 60 shares set up. I wan't to check because I read that at present we can't have more than 180 shares (although this will be improved "later") and when I ran Applications manager I noticed that it was busy creating shares and I wanted to see if they had been left active. I have been to see Word for Windows 6 and Excel 5. They are very impressive but you have to have a lot of hard disc space to install them. I

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was more interested in Windows for Workgroups 3.11 which is being recommended by Microsoft as a replacement for Windows 3.1. It certainly has some useful features and I have ordered a copy so will let you know more later. I have, for complicated reasons, lost my connection to INSITE support. I do think that RM are moving in the wrong direction by charging for support in the way they have decided. It suited me much better to pay a bit more for the kit and get the support thrown in. I am told that they have done their market research and this is what you want. However, every IT coordinator that I have spoken to says they would prefer more expensive kit and free support so the question must arise as to who they do their research on. If you feel strongly please write to Barry Taylor and/or Mike Fischer at RM HQ and let them know. If you think that I am wrong please let me know too!!

I can sympathise with David's comments on RM's charges for support. I know that the commercial world pays vast amounts for support but schools don't have that sort of budget for IT. It may well be that they need to recognise that IT costs money if it is to be delivered well but I'm afraid that what will happen is what has happened to many school activities and it will just disappear (look at what has happened in some schools to activities like swimming or instrumental music lessons). I realise that RM are a company which has to make money otherwise it goes out of business and that does not help anybody but I simply can't afford to buy support at RM's new prices even if they are low relative to other companies. I'll give the final word to RM, however. I reproduce below part of the text of a letter to RM and the reply from RM concerning InSite support. These two items recently appeared on the Bulletin Board.

Having used a Net-LM server for 14 months now, it appears that the original purchase, which included the first year as on site support by RM staff (which was very good) the next two years, we apparently misunderstood as including send-back warranty (which would also have been good,) but now we have been informed that there is a charge of £995.00 for Hotline Support, presumably every year!

So, if there is a problem with the server, or any of our stations still under warranty (many less than 6 months old) we are asked on phoning the hotline and giving our number to Pay up as soon as possible and NO questions will be answered unless we do!

Let's take a hypothetical situation of one of our new 486 stations developing an obvious power supply fault i.e. good 5Amp fuse in plug but completely dead. This machine has a 3 year warranty and is less than 6 months old, yet we are refused a service call number because all offices at RM refer us to Hotline Support first to get this number. Now let us assume that we decide NOT to pay up £995.00 Does this mean that we have lost the 3 year warranty on our recent purchases? If not, will somebody please explain how we can send anything back under warranty?

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It may have been our fault for missing something in the small print of the leasing agreement 14 months ago, but we do now feel somewhat betrayed at the amount asked for for Hotline support ! Somewhere around £150.00 to £250.00 would have been unpleasant but tolerable. This is just like a kick in the teeth !

Any comments from others in a similar position ?

The following is the reply from Dr Tupper, the InSite Support Product Manager

I have just read the message you placed on the bulletin board last night and would like to offer a response. Firstly, I would like to explain the difference between the RM Net LM InSITE Support contracts and the next day maintenance agreement you currently have for your RM Net LM server.

An RM Net LM Basic or Standard InSITE support contract provides you with support services for your RM Net LM software. These services include the telephone support line, software update disks and support notes, technical seminars, technical bulletins and access to the InSITE Support Bulletin Board. These services are independent of your hardware maintenance agreement which provides you with an 8 hour response to any hardware failures with your server. If you do not have a Basic or Standard contract, you can still telephone the Education hotline to report hardware failures. Your maintenance agreements are thus fully covered.

The RM Net LM product literature has always stated that technical support would be a chargeable service. RM Net LM is a complex and powerful network designed to fulfill the demanding task of delivering an effective IT service into the curriculum. A network of this functionality needs specialist support to maintain operation at maximum efficiency. An equivalent network in industry would be supported by a dedicated team of highly trained professionals and be backed up by additional support from the supplier. The criticality of networks in schools and colleges is now no different from that in industry. This is why RM offer the Basic and Standard support contracts. The £995 for Basic support entitles you to use the technical support line, attend two days of technical update training per year, receive termly software updates, support notes and technical bulletins, and gives you unlimited access to the specialist InSITE Support Bulletin Board. If you just take the support line and update training days, these would cost £800 and £600 respectively in the general IT marketplace, which gives you a £1400 bill to begin with. At RM we are commited to providing a top quality support service at the lowest possible price. This we have done with the Basic and Standard offering.

I re-iterate that your maintenance agreements are fully honoured by telephoning the Education hotline. If you would like to discuss any of these points further then please contact me at the usual address.

Yours sincerely,

Lucy Tupper InITE Support Product Manager

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Multimedia News from LTS

LTS have recently released three new multimedia products particularly aimed at schools: Super Show and Tell, PhotoMorph and Video Clips on CD ROM.

Super Show and Tell is a multimedia authoring program which can be used to create presentations or teaching materials. It is designed to be particularly easy to use (unlike some packages which may have more features but are not easy to use) and has successfully been used by primary age children amongst others. Applications which you create can be freely distributed to anyone else who has Windows 3.1

Slides in SS&T can be dynamic - they can have moving text or images (either stills which are slowly revealed or even video) and fonts and colours can be changed on a single frame. No programming is necessary to achieve these results. The system has a normal working screen which has your final product taking up one quarter of the area and the rest of the screen giving "thumbnails" of the neighbouring slides in the presentation and the tools available for use. It is, of course, easy to swap to a full screen to see the presentation as it is being built up. As you would expect, it's possible to put in links so that a user can move from one part of the presentation to another (or even into another show).

You need a computer to MPC specifications to create files (Windows 3.1 on a 386SX, 4Mb RAM, sound card if you want to record sounds and VGA display) but you don't need such a powerful machine to show the results (good programming means that you can get good displays even with normal VGA). SS&T can import a wide range of files so you don't have to be an artist to create your presentation.

The program can not only be used by teachers to produce teaching materials but also by pupils, perhaps as part of project work. Examples might be to produce a guide to the school for open evenings or as part of a sales presentation in a business studies course.

LTS are so confident that users will be able to create presentations within one hour of starting to use it that they can return it within 28 days for a refund. The offer even applies if they find it too difficult to use. This is a welcome offer - if you've never used a package like this before it's hard to know if it will do what you want so it's good to be able to try it out without having to risk a lot of money (and the price is a very reasonable £79 anyway).

If you want to make presentations look good then you need some material to include to go with the text that you can create yourself. The Video Clips on CD ROM series provides one such source. Each disc contains 30 minutes of video and 1 hour of Audio and there is a wide range of topics, including Famous Faces (JF Kennedy predicting men on the moon before the end of the 1960s, Henry Ford driving his first car), Famous Places (find out about the building of the Taj Mahal or the Leaning Tower of Pisa), Nature in Motion, Seasons in Motion (winter forests, autumn leaves etc), Science in Motion, Sports in Motion

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amongst others. Each CD also contains text - quotations and biographies, for example.

The Visual Impact series contains 2 special effects volumes including 3D animations, tidal waves, ghosts and others. Finally the stills series comprises discs with over 300 24-bit colour images on a huge range of topics. Note that you don't need a 24-bit colour card - the disc contains a program to reduce the colour depth with minimum loss of quality to (for example) 256 colours. Note that all the data on the CD ROM can be used royalty free in your presentations - no worry about copyright infringment or licence fees. The series of 35 discs range in price from £34 for the stills to £79 for the Special Effects.

Morphing is the process of taking one image and blending it into another. For the moment its main use is in entertainment (music videos, advertisements and films such as Jurassic Park or Terminator 2) but other areas are being investigated (from the almost frivolous such as trying out new hair styles to Police use to show what a missing child might look like when they are older than the last available photograph). PhotoMorph allows you to take one image and transform it into another, producing a video sequence of the process. The morph can simply transform the starting image to the ending image or it can make use of any of 18 distortion effects (such as ripple, pinch or zoom). It's also possible to use any of a series of transitions (fade to black, curtain etc).

The package can import from a large range of picture sources and the resulting sequence can be played back on any computer with Windows 3.1 (a freely distributable copy of the runtime Video for Windows is included) or any other computer which has a program capable of playing .FLC files - even a 286 with 2Mb of memory.

The program also comes with some ideas for curriculum use but I suspect that the best way to use it is to tell pupils the basics of what it can do and let them get on with it. Many of them will have seen the sort of results that it can produce and will be very keen to experiment!

PhotoMorph sounds like great fun. A demo disc is available for £1 and a sample video for £5 (which is refundable if you order the product). It costs £79 but comes with LTS 28 day money back guarantee.

For further details of the above products, contact LTS at Haydon House, Alcester Road, Studley, Warwickshire B80 7AN Tel: 0386 792617

LTS are sponsoring the National Multimedia awards which are being organised by NCET. Not surporisingly, they hope that you will make your entries using Super Show and Tell but you can use any software. The competition closes in March 1994 and is open to all schools. To be eligible for an award, schools must submit a curriculum related project, presentation or resource catalogue entirely in digital form on floppy disc or CD. Further details from The National Multimedia Awards Office, NCET, Milburn Hill Road, Science Park, Coventry, CV4 7JJ Tel: 0203 416994

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Technical Tips

Stephen Sharrad

Close Squeak

Many users of RM machines such as the X series and PC186's with harddrives sometimes report an irritating squeaky noise. There is normally nothing seriously wrong with the drive, but as time progresses the noise will become more high-pitched, so that a sound-proof box to house the computer may be in order.

The reason for this unfriendly noise? Most AX and VX machines fitted with 60MB drives (and some PC186's with 60MB drives) are fitted with Seagate 277R's. These ancient 5.25" harddrives have on the underneath side a spindle and brush. The spindle comes through from the centre of the drive, and the brush is simply there to provide a ground supply. There is a lubricant but after time this will wear away, causing a squeak (the spindle is rotating at 3600 rpm). Don't use oil as this doesn't conduct electricity (and therefore large amounts of static can build up on the spindle - not a good idea) and also oil tends to wear fast into a useless gunge-like paste. The stuff to use is WD-40. Spray sparingly. Use a bit on a cotton bud to clean the brush and then apply directly to the brush and spindle. Leave for 10 minutes to dry before trying. Try not to get any WD-40 on the surrounding electronics because WD-40 conducts.

Driven Mad

I am quite surprised to find that in all of the most recent of RM's technical product guide that RM now only supply high-density (HD) discs. For Double Density discs I would recommend those made by 3M. I never buy unbranded discs because I have found them to be unreliable after a period of time) but I am surprised to find that the RM catalogue quotes "The 1.4Mb floppy discs can be formatted as 720Kb for use on PC-186 systems." This may, however, be inadvisable.

For a start, the older models of the 84-key system fitted with the YE-640 drive can't use these discs at all (because of the extra notch on the right-hand side) because the drive thinks it is trying to read a single density (360k) disc. (As mentioned in Technical Tips in Volume 8:1 of RM User.) However, most other 84-key systems and all 102 key systems will format these high density discs. So what's the problem? What happens if you format the 1.4Mb disc on a PC186 as 720Kb. You then put all of your work files on the disc and try to use the disc on another machine, an X, S or M series. These machines will recognise the notch on the disc and will attempt to read 1.4Mb discs. A General failure will be reported because the machine is trying to read a 1.4Mb disc which is in fact only 720Kb. Therefore, if you want to maintain compatibility with all other machines, use double density discs in double density drives (i.e. PC186) and high density discs in high density drives (M series or above).

Fast Format

Also, on the subject of PC186 discs, if you have an old disc full of many files and sub-directories, and you want to completely clean-out the disc, you may use RMTREE DEL. (If you have RMTREE). However, this is slow as RMTREE processes each file

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individually. You may then want to verify disc integrity so you use DVERIFY. More time. Of course, you could just completely re-format the disc, but this also takes a long time. It is therefore worth remembering the /C switch in MS-DOS 3.1:

```
FORMAT A: /C
```

This scans the disc for bad sectors and clears the FAT (file allocation table), but does not actually re-format the disc, and it therefore saves about half of the time. It will erase all files off a disc and verify for bad sectors all in one go.

With MSDOS 5 things are different. The default is to save the root directory and FAT, then wipe the FAT and verify the disc without deleting the data. This allows the Unformat command to recover the data. Format /U performs an unconditional format which was the default for earlier versions.

On the subject of bad sectors, it is worth remembering that DEVRIFY and XVERIFY cannot always identifiy bad sectors, because if the sector is only partially damaged it may be able to be read some of the time if the tolerances of the drive are not very close. (For more information on discs and bad sectors, see the article "How: The disc drive" in this issue of RM User).

Editor's note: DOS 6.2 adds to the confusion by re-introducing the /C switch but to mean something completely different. Earlier versions of the DOS Format command automatically try to recover sectors which have been marked as bad. This can cause problems because sometimes sectors are readable occasionally as they start to fail. If Format marks them as usable and you then store crucial data on the disc you can be sure the disc will fail! DOS 6.2 does not try to recover bad sectors by default but the /C switch forces it to test them to see if they can be re-used

Minor Miracle

Normal PC's, including the M/S/X series use battery backed CMOS memory to store all the different options and system settings. Some programs, like Norton Utilities read the CMOS device table when determining system components. One useful things about CMOS as regards hard discs, is that if you can't find a particular setting to match your hard disc, then often you can create your own setting (e.g. Drive Type 17, user definable). This allows newer hard discs to be used on a a system, which may not have the hard disc in its CMOS list because the hard disc type did not exist when the system's firmware was written. (Firmware is software which is built in to the computer).

Unfortunately, the PC186 doesn't have CMOS, which not only means that programs like Norton tend to crash, but also newer peripherals cannot be added to a PC186 unless its firmware chips are upgraded. The PC186 uses an EEPROM (A re-programmable ROM, which is non-volatile). With hard discs, the PC186 firmware contains a list of a relatively few drives the PC186 can use. On power-up, the firmware asks the EEPROM what things it needs to know, it may then perform a memory self-test (if the EEPROM says it should) and then it looks for an operating system. If it finds something which

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appears to be a hard disc, it asks the device for its ID and then checks with the drive list in the firmware to see if that drive is supported. If it is, then the machine will scan the hard disc's partition table to see if it is bootable. If it is, it will then boot from the hard disc.

The 102 key PC186 systems (known as the QD) have a relatively modern firmware which includes support for the Connor CP3040 harddisc. Unfortunately, this drive does not appear in any versions of the 84 key firmware. These firmware chips cannot be used in an 84 key because the keyboard then fails to work correctly. This is in fact quite a shame because the CP3040 drive can be picked up second hand for about £60 and new from Circuit Micro Systems (081) 760 0705 for about £110. (Of course, you may need a SASI interface if you don't have on already). However, for some strange reason, if the Connor drive is low-level formatted, and partitioned on a QD, then the drive can then be DOS formatted and used on an 84 key system. This is in fact a minor miracle. The only drawback is that to use the Connor drive it must be the boot drive otherwise it is not recognised. Getting the Connor to work with other drives on the same system is also a major problem and the Connor is not validated for use as an external winchester (but this also can be achieved). If other drives are on the same system then these MUST be up to speed before the Connor starts booting otherwise you will not be able to access all other harddrives. One way to do this on an 84-key system is to ensure that the machine performs a memory self-test on power-up. (QD systems overcome this by telling lies. The "Looking for Winchester" message does not look for any winchester, but it is simply a timewaste introduced by RM to ensure that all drives come up to speed in time).

Further Miracles

Turbo Pascal 5 on a PC186 sometimes corrupts the display (and therefore you need to perform the refresh desktop operation). However, Turbo Pascal 6 and 7 on a PC186 suffer no such problem and both run very well on a PC186.

Turbo C++ 3.0 and higher does not run at all on a PC186 because it expects extended memory, but version 1 (available from Data Shack, (0483 300824) for £29 excluding VAT and carriage) runs fine (and Steve Rochford informs me that version 2 runs OK as well). Microsoft C also runs on a PC186.

Paint Shop Pro V2 is an excellent program requiring Windows 3.1. It converts between many popular graphics formats and also has some very advanced utilities including a Windows screen capture. Paint Shop Pro V1 only needs Windows 3.0 and runs very well on a PC186. It is also one of the only programs that copes reasonably well with the PC186's obscure palette and graphics. Version 1 has most of the options of Version 2 but some of the options on a PC186 can take up a lot of time (and memory), such as converting a colour picture to monochrome for export to GEM .IMG format (as used on Atari STe's) by decreasing colour depth. Paint Shop Pro will also load in PCX pictures created by the native Nimbus mode version of PC Paintbrush 3.01. (although it cannot export in such

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format). Paint Shop Pro can cope with RGB (Red, Green, Blue) and RLE (Run Length encoding) for Windows 3 bitmaps.

Paint Shop Pro Version 2 costs £49 and Version 1 (if still available) costs £39. Contact the Thompson Partnership, Church Croft, Bramshall, Uttoxeter, Staffs, England, ST14 5DE or on (0889) 564601. A fully-working shareware version of Versions 1 and 2 are available on the RM bulletin board.

If anybody has any computing problems on any RM machine (380z-QE Series) or queries on anything mentioned in any of my articles, please do not hesitate to contact me, my address is in the list of committee members in the back. If anybody out there also has CorelDraw Version 2 (on floppy disc, and if there is any other PC186 software out there) which they could sell, please contact me also!

Adding a SCSI drive to a Net LM server

Steve Rochford

I have 3 network servers, 1 PDC and two backup controllers. The backups have 300Mb drives and this is fine (they only hold the network software and the public library) but the PDC with its 650Mb drive is full to bursting point. RM currently offer no upgrade path (or rather they do but it involves buying a new server at a cost of thousands!) so I decided to investigate other options. Please note that what follows is a description of something I tried. It is ***not*** supported by RM and, while it worked for me, I can offer no guarantee that it will work for you. Do not attempt this unless you are certain that you could get back to a working system if something goes wrong. I decided to put all the public software on my new drive.

The first step is go get hold of a SCSI drive. I had a spare 200Mb drive (left over from a Net 3 server) which is what prompted me to try this but you can buy 1Gb drives for £700 or less if you shop around. Having got the drive you need to change its address to one that is vacant - I chose 4. Now make sure you have a complete and good backup of your server and then close down the server.

Open up the box and you will find plenty of spare slots. Fix the drive in on of these, connect the data and power cables and switch back on. As the server starts, the SCSI interface should list the names and IDs of the SCSI devices connected. Check that your new drive is listed. Once OS/2 has started, log on and run FDISKPM to create a partition on your new drive. When I did this the program did not offer the choice of reformatting my existing drive but if you are offered a choice of two drives make sure you pick the right one! When you have partitioned the drive, close down the computer again and restart it. You should now have a drive D: but it needs formatting for HPFS. This takes a few minutes but once it is done you have a useable drive. Make a directory called public and then use the Net Access command to set the appropriate access rights. You can now copy the files from drive C: to the new D: drive, change the shares so that the public share points to D:\public instead of C:\public, stop and restart the server and check that it works.

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How: The Disk Drive

Stephen Sharrad

The disc drive is something that most of us probably take for granted. Modern drives are faster and quieter than their predecessors, and have larger capacity. They are also reliable and all drives of similar specification are interchangeable, so that you can write data in one drive and read it in another. Floppy discs have also been advanced into high-speed winchester or harddiscs, which are now considered essential for all standalone systems requiring access to modern software.

However, although the disc drive may be something that we take for granted, the fact is that even the simplest drive requires high precision electronic and mechanical techniques. But, if you are a regular user of disc drives, what do the assortment of errors reported by MSDOS, such as Data/Seek errors and General Failures and Sector not found errors mean? Just what is an allocation unit, or cluster? How does MSDOS use a disc?

It is generally known that information stored on a disc is stored in a series of 0's and 1's. The state of a bit is set by which direction the magnetic flux is recorded on the disc surface (which is normally made out of Mylar with a special coating of iron oxide). This method is called NRZ (Non-return to zero) method. This means that there is not intermediate state; magnetism is either 1, 0, or an error (which is not treated as 0) if there is no magnetism. However, data cannot be just dumped onto a disc. Discs have to be interchangeable with other drives, and the information must be stored as efficiently as possible. Also, there must be some way of detecting whether the information being read from a discette is in fact accurate.

To start with, discs are organised into tracks. On a 720kB 3.5" disc, there are two sides of 80 tracks (160 tracks in total) which are organised into 9 sectors per track. Each sector is made up of 512 bytes. Check: 512*9*160= 720kB. However, a disc drive needs to be able to recognise which sector is the first sector on the tracks. The older 5.25" system uses a punched hole (the index hole) to mark the first sector. This is known as soft sectoring. This is the most popular method. Hard sectoring is where holes are punched at the beginning of every first sector for each track. The editor reliably informs me that this was used on the Commodore PET, but I don't go back that far!

Each sector has an ID marker, so that the host computer can locate where it is on the disc. However, the 512 bytes on a sector are also organised into frames, or segments. Each segment is split up into a clock bit and a data bit. The clock bit is to synchronize the data. Many variations of this frequency modulation exist, the most popular being MFM (Modified Frequency Modulation), where a clock bit is only written if there are two data bits containing 0. This allows for greater bit density. This also provides some kind of ECC (Error Correction Code) - if a computer does not read a clock bit but reads two data bits as zero then it knows that the data is incorrect (and therefore a data error is reported on the host computer).

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This will also happen if a clock bit is read but is not followed by two zeroes. If an ID marker can be read when they are expected, then a sector not found error will be reported because the computer cannot locate a sector it expects to find. Any missing bits or ID markers would typically be caused by "bad sectors" where the magnetic flux cannot be read or written to a disc correctly. No magnetic flux does NOT mean zero, the NRZ mentioned above means that zero is one direction of magnetism. If no magnetism can be read, this is a form of seek error. If an entire track is bad, this will cause a track not found error on the disc. If the system track is bad or corrupted, a General failure will be reported.

The R/W head of any drive is a delicate piece of electronics. Each head in fact contains 3 heads. In front is the R/W head, but behind and slightly to the left and right are two erase heads. After the R/W head has written a bit of data, the erase heads trim the bit on either side to leave a gap between each bit. This is called "tunnel erasing" and it stops noise developing between bits. It also ensures disc interchangeability.

For data to be read accurately off a disc, drives need to ensure that the disc is rotating at the correct speed of 300 rpm. 5.25" discs use the punched index hole, LED and sensor to accomplish this while 3.5" drives have the sensor mounted on the bottom plate of the spindle on the drive. If a drive is not spinning fast enough, a Not Ready error may be reported.

To position the R/W head over the correct track, all tracks are relative to track 00. A sensor on the moving head mechanism informs the drive when it is in the outermost position (track 00). The host computer then can find any track by telling the drive to move the stepper motor forward any number of steps. The write-protect sensor is in fact monitored by the drive and the write enable gate will be held low if the disc is write-protected to stop data from being writen to the disc.

Bad sectors can be caused by touching the magnetic disc by pulling back the cover, or by exposing the disc to strong magnetic fields. Another way bad sectors can be easily created is by leaving any disc in the drive when you turn the computer on or off. This is because the heads can "jump" when power is suddenly applied or removed. Discs are more likely to develop errors in outer tracks because there is more room for noise etc.

Errors on harddiscs can be caused by moving them if they are not of the self-parking type. (Most harddiscs, if not self-parking, will incur head/disc damage if they receive a force in excess of 35G's) All new RM computers have self-parking harddiscs. Some old X-series (e.g. AX/VX 20/60MB systems) may not have self-parking drives. Most M series drives will not be self-parking except the latter models. Virtually all PC186 systems are not self-parking, the exceptions being the 102-key PC40 and SOME PC20's. (How does a harddisc self park? The idea is very simple: The motor which spins the rotating discs at 3600 rpm, when turned off (when you turn your computer off) carries on spinning for a short while. This produces a back voltage ("inertia") which is used by the mechanism to move the R/W heads into the shipping zone and then apply the disc brakes. This means that if you turn a self-parking harddisc on

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and off very quickly the heads will not be parked).

Although the disc is already organised, software organisation now comes into play. MSDOS organises its sectors into clusters, or groups of sectors. On a 720kB disc, the cluster size is 1024 bytes, or 1k. (There are therefore two sectors per cluster.) This means that the minimum space a file can take up is the cluster size. For example, if a file was only 2k in length, but the cluster size was 16k (as it would be on a 1GB drive) then the file would take up 16k. This amounts to wasted space, because on a 60MB drive the cluster size may only be 4096 bytes, meaning that you could store more 2k files on a smaller drive than a larger drive. (See Technical Tips, p11 in Volume 7:2 of RM User for further information). It must also be noted that directory entries, which are treated as files by MSDOS, also take up the cluster size. Also, file entries in a directory (as recorded in the file allocation table, or FAT), take up 32 bytes each. Therefore directory clusters approximately =Number of files in a directory/(cluster size/32 (+1 if number of files is not a multiple of 32)) This means that even directory and file entries take up more space in the file allocation table. On a normal floppy disc there are two FAT's, (one is a backup copy of the other; the disc can still be used (but replaced as soon as possible) if the first FAT gains bad sectors) which chain the clusters together. If a cluster is allocated to a file which doesn't exist, then DOS chkdsk will reported x lost clusters found in y chains. Use the /f parameter in chkdsk to correct this problem. Allocation errors are where files are allocated too many or two few sectors. If they have been allocated too many clusters, CHKDSK can correct this error.

There also exists a Base Parameter Block (BPB, sometimes referred loosely as the boot-sector) on a disc which identifies a disc to be in MSDOS format and records the physical parameters of the disc. DVERIFY/XVERIFY will report an error if the BPB has been corrupted. Harddiscs are even more complicated, but they are based on the same principles as floppy discs. A harddisc BPB also includes a partition table, as hard discs can be partitioned in most versions of MSDOS in to more than one drive. (By using the DOS FDISK utility. PC186's can only have one MSDOS partition per drive).

One way to verify that your disc and drive are working 100% effectively is to enter

VERIFY=ON

at the DOS command line. This means all data is verified as it is written to the disc to make sure that it has been written in such a way that it can be re-read. Note that it does not guarantee that what is on the disc is the same as the original data, only that it can be re-read. There is no noticeable degradation in disc performance. To find out the current DOS verify setting, just enter VERIFY at the DOS prompt.

All of this just goes to show that the disc drive is not a simple piece of electronics. The next time you think your floppy drive is slow - just try and remember the mammoth task it is trying to perform!

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Controlling Windows 3.1 on a Standalone Computer

Steve Rochford

One of the nice features of Windows is the degree to which a user can configure their system. If you are the teacher in charge of a number of computers in a school, however, this configurability can be a source of grief if the children decide that your working configuration is not what they would like and decide to alter it for you. Fortunately, Windows provides ways of preventing users from making changes which you don't want them to make. This article tries to show some of the ways in which you can prevent users from destroying your hard work. Note that it is assumed that you are trying to cope with people who experiment and accidentally mess things up rather than with "hackers" who are determined to do damage. Although there are ways of dealing with this it is probably better to try and educate them to not be destructive.

Before you start, take some time to make copies of essential files just in case things go wrong and also so that you can get back to a normal setup. Take a blank floppy disc and put it in the drive. Start Windows and run File Manager. Choose Disk Format Disc and click the box Make System Disc and then OK. When formatting has finished, select all the files whose name ends in INI and those whose name ends in GRP (you will find it easier to do this if you choose View Sort by Type from the menu first. This puts all the INI and GRP files together. Click on the first one and then hold down the CTRL key. Click on each of the other files in turn.) Now drag these files to the disc A icon or choose File Copy from the menu, type A: in the box and click on OK. Close File Manager and put this disc away safely.

Make sure that you have got Windows set up in the way you would like it to stay and then load Notepad. Open c:\windows\progman.ini using the File Open command. Near the beginning you will see some lines which begin with the heading [Settings]. These lines control the way in which Program Manager starts up and will look something like:

```
[Settings]
Window=76 14 623 562 1
SaveSettings=0
MinOnRun=0
AutoArrange=1
display.drv=supervga.drv
Order= 4 5 1 2 3
```

SaveSettings=0 means that Windows will not try to save the program manager settings when you exit, MinOnRun=0 means that Program Manager does not minimise when a program is launched and AutoArrange =1 means that the groups are automatically re-drawn on screen if any icon is moved. The next section is headed [Groups] and lists the groups on your Program Manager screen. You are going to add a third section headed [Restrictions] which will look something like this:

```
[Restrictions]
NoSaveSettings=1
EditLevel=4
NoRun=1
```

This greys out the Save Settings on Exit choice from the Options menu and greys out New, Move, Copy, Delete and Run on the File menu. It also prevents users from editing the File Properties. Save this file and exit from Windows. Restart Windows and

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check that the things you wanted to protect are now protected. If you want to prevent users from quitting Windows then adding a `NoClose=1` line will prevent them from quitting altogether (except by switching off!). If you only ever want the computer to be used in Windows then this may be acceptable.

Of course, what you have done to protect the system can be undone if users can simply reverse the steps you made. To stop this from happening you need to *write protect* the critical file. You can do this in File Manager. Start it up and change to the Windows directory. Find the file called Progman.Ini and click on it. Now choose File Properties from the menu and click in the Read Only box. Finally click OK and exit File Manager. Provided that you remove File Manager from the normal Windows desktop and do not give access to the DOS prompt then users cannot easily reverse this change. While you are removing programs, you might want to remove Control Panel. It's great fun changing the desktop colours and so on but it can cause chaos! Again, this is an area where you have to decide how much of a "Big Brother" you want to be. If you do decide that you will let people change colours and you find that the colours are unuseable then running control panel, pressing Enter and then an arrow key will change to one of the preset colour schemes and let you see what is going on. Of course, if you have disabled the File Run command then you can't do this so you will need to use the steps at the end of this article to get back to the original settings.

These changes also prevent you from making changes to the desktop. When this happens you must be able to restore Windows to its original settings and this is where the disc you put away safely comes in. The first step is to get rid of the file called Progman.Ini which is preventing you from making changes to the Windows setup. You need to do this outside Windows so get to the C:\> prompt. (If your computer is set to go straight in to Windows and you have made it so that Windows can not be exited then you should put the disc you made earlier into the floppy drive and reboot the machine. It will now start by loading DOS off this floppy and will not start Windows. Type C: and press enter to get to the C:\> prompt) Now type

```
\DOS\ATTRIB
  \WINDOWS\PROGMAN.INI -R
```

this sets this file to be *read-write*. Now to copy back all the files you saved earlier on the floppy. Put the disc in the drive and type

```
COPY A:*.GRP C:\WINDOWS
COPY A:*.INI C:\WINDOWS
```

If you started your computer from the floppy disc then take out the disc and restart the computer so that Windows loads automatically, otherwise just type WIN to start Windows. You will now find that you can make changes to the settings in the normal way. Once you have got the changes made that you want then you can save these settings in the same way as before. Note that you should again make a copy of the GRP and INI files before you make the changes to Progman.Ini.

I hope that this gives you some ideas about how to make your system more robust - let me know if there is any area you need clarifying.

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Templates for Modern Languages in Word for Windows

Derek Henton

The acute, grave, cedilla etc are required to write text in French and or German. The process from the menu bar in Windows uses Insert-Symbol (normal text) and then the selection is made by hunting in a 7x32 matirx - a total of 224 entries.

The process is time consuming and to this end I was asked to try and find a quicker method. My first inclination was to reconfigure the keyboard to the country required. That was until I realised that our QWERTY keyboard is not universal (for example, if you select French from the languages section of control panel then top line of the keyboard changes to AZERTY). The second try was to select Num Lock and then press ALT while typing in numbers from 001 to 255 - the whole of the ASCII character set. Lastly I tried generating macros and saving them in the normal template. The function keys have designated uses which are not too important except for speed typists who do not want to use the mouse and menus but I was reluctant to use them.

The method I settled on was to create a modern languages template and use the function keys to trigger template macros. Generation of the template by any user can be accomplished by opening and editing NORMAL.DOT, not as NORMAL.DOT but as MODLANGS.DOT. The template was then moved to P:\RMLIB\WW2. Finally the MTSL was changed.

Generate MODLANGS.DOT.

1. Log on as a normal user and start Word for Windows.
2. File Open n: File Type Document Template (*.DOT) Select normal.dot and click OK
3. Tools Record Macro
4. Record Macro Name as AGRAVE
5. Shortcut key Key F2 Ctrl No Shift Yes
6. Insert Symbol (normal text), select à then OK
7. Tools Recorder Stop
8. Repeat steps 3-7 for remaining symbols as shown below with steps 5 and 6 relating to the particular symbol. It is suggested that step 6 is ignored for F2, <Shift> F4, F8, F9 and F10. This removes the global function which will cause confusion if accidentally pressed.
9. Confirm the existence of the 13 macros by selecting ToolsMacro
10. Further confirm by selecting Tools Options then Category as Keyboard Show Macro and Context as Template.
11. Delete all the text and save the document as N:MODLANGS.DOT. All the macros and page formatting are now saved with this template.
12. Close Word for Windows and log off.

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Shift	Help	à	ä		è	ë	ï	ö	ù	ü
			â	ç	é	ê	î			

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Transfer MODLANGS.DOT to P:\RMLIB\WW2

1. Log on as ADMIN
2. Start File Manager and select previous user's drive (eg R: for restricted users). Wait for all user directories to appear and then select the user where the file MODLANGS.DOT can be found.
3. Select the file MODLANGS.DOT then File Move, type P:\RMLIB\WW2 and then OK

Amend MTSL for Word for Windows

1. Start Application Manager and select mwinword.exe
2. After the line

```
    if not exists
n:normal.dot copy
p:\rmlib\ww2\normal.dot
n:normal.dot
```

add the line

```
    if not exists
n:modlangs.dot copy
p:\rmlib\ww2\modlangs.dot
n:modlangs.dot
```

The "if not" allows users to retain their templates with their personal preferences in their home directory.

Finally start Word for Windows 2 and select File New and the template MODLANGS.DOT should be present - simply type and press function keys as required. If you run Word 1 and Word 2 then you should prepare a template in Word 1 and copy it to P:\RMLIB\WW1 as well. Add an appropriate line in both parts of the Word MTSL. If you have any problems then please contact me on 0902 341230.

RM are supplying a template which offers an alternative approach to foreign language support; to enter an accent you type the unaccented letter and then press SHIFT CTRL and a letter eg V for graVe, A for Acute. You may find that this is simpler to understand because you can print out function key strips to go on the keyboards.

I hope that it also shows you that macros need not be terribly frightening things. They are small programs but they are often generated just by getting the computer to record a sequence of key strokes and then play them back when needed. If you ever find yourself using the same sequence of menu choices then maybe you should record them as a macro and attach them to a template. Do let me know if you have had any good ideas for macros and templates.

Finally note that although Derek has described the process for a network it also works on a non-network computer but is simpler. The last two sections are not needed at all and step two in the first needs to look in the directory C:\WINWORD for the file NORMAL.DOT.

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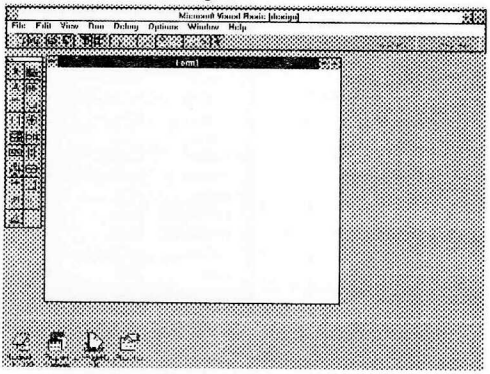
A conversion Calculator in Visual Basic 2

Howard Toon

Starting up

The first impression on starting Visual Basic is that the screen is very cluttered with a number of different features. Simply ignore the clutter or shrink the unwanted parts down to icons. The starting screen can easily be tidied up to give this basic layout by shrinking unwanted features to icons or even closing them until needed.



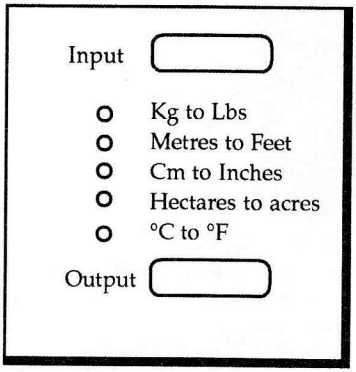
This contains all we need to start work on our program. The main feature is the blank form in the centre. The visible part of any Windows program is called a form and Visual BASIC gives you a fully functioning blank to start with. If you Start/Run the program as it is now, you can experiment with the blank form and try out the dragging, sizing and control features which are available. Be sure to use the control CLOSE feature to return to the Visual BASIC editor afterwards.

Our Program

The program we are going to build is a multi-purpose calculator for metric to Imperial calculations and, later, their inverses. This would take many hundreds of lines of code in any normal programming language but is child's play in Visual BASIC.

We must first decide how the application should look so we start with a simple sketch to get our ideas sorted out.

Now we can see what we need to



add to the form. We need some labels, 'Input' and 'Output', some text boxes where we can enter the numbers and see the results, some option buttons (I prefer to call them radio buttons) so that we can select which conversion is to be done and two command buttons, one to carry out the conversion and one to stop the program when we no longer want to use it. We could add as many radio buttons as we want but only the first few are on the sketch.

These objects can be placed on our blank form by simple copying them from the toolbar at the left of the Visual BASIC screen.

The objects we want are the label object (second on the left), the text box object (second on the right), the command button object (third on the

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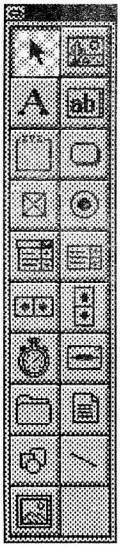
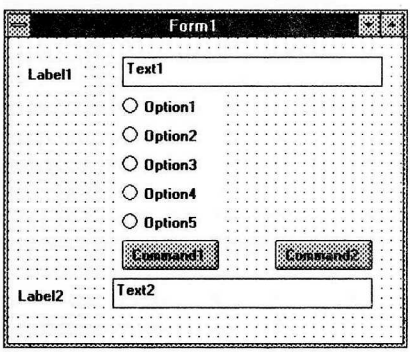


right) and the radio button object (fourth on the right).

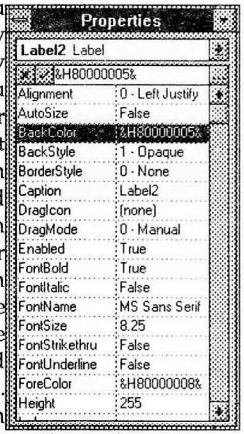
Our next step is to copy the objects we need onto our blank form and this is simplicity itself. Just double click on the tool bar object and a copy will appear on the blank form. The copy can then be dragged and sized, using the arrow pointer (top left) until we have the basic layout the way we want. Objects can be deleted (just highlight and press the Delete key) or moved at will so this design stage is infinitely flexible and very simple to perform.

After playing with this for some time you should come up with a layout something like the following and you are now ready to refine the design and make it look more friendly.



The obvious changes we need to make include the wording of the labels and the options and the captions on the control buttons. The contents of the text boxes also need to be deleted and the title of the form itself is not very obvious. All of these things are known as properties and they, and many other properties, can be tailored to the requirements of the program.

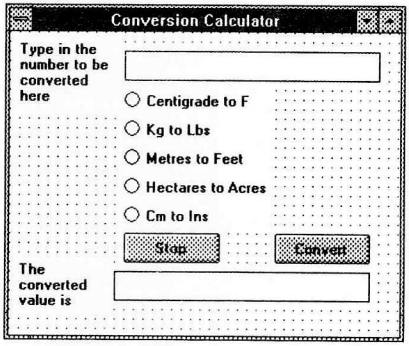
Let's start with the two labels. Click on the top one to highlight and then press key F4 to bring up a properties list something like this:



From here you can directly change any property you wish. For example, select the caption property and type in your own label "Input" or some such. Then select the BorderStyle property and make it type 1. You can play with these properties until you have the effect you want and you can always undo those you do not want. Sometimes the editor line in the property box has three dots to the right of it (as in the diagram) and you can click on those dots to get a list of options from which to choose. At other times, such as with the caption, you are left a free choice of what to enter. You can do no damage by playing around with the properties since, as a last resort, you can just delete the object and start again with a new one.

At any time when you are playing with these properties, try running the program and looking at it. You can go back and forth from editing to running as often as you like until you have the form the way you want it to look. My version is shown below and the properties I've set are listed below it. Notice particularly that I've changed

the names of some of the objects because I will need to refer to them later and it will help me to remember which is which. It should be obvious which object goes with which name. Note that only the most important properties have been shown.




```
Form
  Caption   = "Conversion
              Calculator"

CommandButton
  Name      = ConvertButton
  Caption   = "Convert"

CommandButton
  Name      = StopButton
  Caption   = "Stop"

OptionButton
  Name      = CmToIns
  Caption   = "Cm to Ins"

OptionButton
  Name      = HToAcres
  Caption   = "Hectares to
              Acres"

OptionButton
  Name      = MToFeet
  Caption   = "Metres to Feet"

OptionButton
  Name      = KgToLbs
  Caption   = "Kg to Lbs"

OptionButton
  Name      = CToF
  Caption   = "Centigrade to F"

TextBox
  Name      = OutputText

TextBox
  Name      = InputText

Label
  Caption   = "The converted
              value is"

Label
  Caption   = "Type in the
              number to be
              converted here"
```

By now you have a complete outline of the calculator project and the basic mechanisms should all work as you would expect. It doesn't actually do any conversions yet, that's the next step in the exercise but the command buttons depress nicely when you click on them, radio buttons switch as you would expect so that only one is set at a time and the text boxes are a wow! - you can enter and edit text just like a professional text editor along with scrolling, cursor moves, deletion and insertion in a way that would cost hundreds of lines of code in a previous programming language. Progress so far is probably so fast and easy you're ready now for the bad news - but there isn't any since adding the actual instructions or code is just as easy as planning the layout and creating the form.

Adding the code

To add code you simply decide what each operation, usually of the mouse, is going to do. My plan for the conversion calculator has two basic operations. The simplest is just to close the program down when the stop

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button is clicked and the other is to do a conversion along the lines of:

- Type a number into the text box
- Select an option button
- Click the convert button to produce an answer

Let's do the simple one first. In the Visual BASIC editor just double click the STOP button and a special code form appears.

Note that the code form already contains the first and last lines of code for this operation DO NOT change these two lines or try to type code outside them or the editor will throw up error messages. Note also that the code window assumes that we want to write code for the mouse being Clicked on this button. You can use the drop arrow boxes to select any other object or any other operation but this is the one we want for now.

For our purposes the operation to carry out is simply to end the program so just type the keyword END in the space provided.

You can now close the code window and try running the program again. The majority of the buttons still don't work of course but clicking on the STOP button now closes the program down and returns you to the editor. It's as easy as that and, what's more, it doesn't get much harder for any of the other operations either.

We now need to re-examine the other code required. The radio buttons will generally take care of themselves but when selected will generate a TRUE signal in the property called VALUE. If, for example, you click on the MToFeet button then MToFeet.Value=TRUE and the corresponding value for all the other radio buttons is FALSE. This is the method we will use to check which button is selected

The other parts of the code involve reading the input text, converting it as necessary into a number, converting the input value to the selected output form and then transferring the number obtained to the output box. Converting text into a number is done by a function called VAL() and the opposite is achieved by the STR$() function. Since all this has to be done when the CONVERT button is clicked we attach the necessary code to that button.

Double click on the CONVERT button to open up the code window and type the code to look like the following.

```
Sub ConvertButton_Click ()
InputNumber =
  Val(InputText.Text)
'this converts the text to a
  number
If HToAcres.Value Then
  Conversion = InputNumber *
  2.47
If KgToLbs.Value Then
  Conversion = InputNumber *
  2.2
If MToFeet.Value Then
  Conversion = InputNumber *
  3.2811
If CmToIns.Value Then
  Conversion = InputNumber *
  .3937
If CToF.Value Then Conversion
  = InputNumber * 9 / 5 + 32
'these are the conversions in
  my diary
OutputText.Text =
  Str$(Conversion)
End Sub
```

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Now when you run the program you can type in a value to the top box, select a conversion and when you click the CONVERT button the answer appears in the bottom box. It even has some rudimentary crash proofing built in since you can type anything you like but only valid numbers will be extracted. If anything else is typed then the conversion function VAL simply returns a zero.

There are obviously many improvements that can be made to the conversion calculator but one that will help make it a little more robust is to select a default conversion at start-up. At the moment, none of the radio buttons are selected when the program first runs so we are going to switch one of them on as a default. This has to happen as the program first loads the form and the place for the code is in the form load box. Make sure that editor is active by clicking on the STOP button if necessary then double click anywhere on the form - not on one of the objects you have put there. You should have the code page for the FORM and LOAD so just type the code as follows:

```
Sub Form_Load()
      KgToLbs.Value=True
End Sub
```

Now when the program is run you will have the KgToLbs radio button already highlighted as the default.

You should now be in a position to upgrade the program with additional radio buttons for other conversions and be able to add the necessary code to the convert button.

Visual BASIC is rapidly becoming the most used programming language. If you've never done any programming before but think that you would like to find out more about it then I can recommend Visual BASIC. To write a program like this in a traditional language would take pages of code, very little of it concerned with the maths of the conversion and most of it concerned with putting menus on the screen and checking what the user types. Programming like this means that the bulk of the program is the bit you're interested in (in this case the maths) and all the interface design is done just by dragging things on to the page.

If you want to get Visual Basic for a school then it costs about £200 for a ten user licence which makes it just about the cheapest language you can buy.

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Micro Mart

For Sale

8 Nimbus AX (2Mb memory, 3½" disc, EGA monitor, Ethernet card) @£170+VAT (=£199.75). Price does not include carriage.

Contact:

Jonathon Gladwin, Maths Dept., Nottingham Trent University, Nottingham, NG1 4BU Tel 0602 418418 ext 2036

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The Crisis Detector

WARNING!! *Stephen Sharrad*

THIS MACHINE IS SUBJECT TO BREAKDOWNS DURING PERIODS OF CRITICAL NEED!

A special circuit in this machine called a "crisis detector" senses the user's emotional state in terms of how desperately they need to use the machine. The crisis detector then creates a malfunction proportional to the desperation of the user. Threatening the machine with violence or the use of curses and obscenities may soothe the user but will not fool the crisis detector and will only aggravate the situation.

Likewise, attempts to use another machine may cause it to malfunction because they both belong to the same union. Keep cool and say nice things to the machine. Nothing else seems to work!

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Your Magazine

I really do welcome items for the magazine from anyone. You don't have to be a great writer to send something in; send a letter or a short tip for the Hints and Tips pages, everything is welcome. If you want to phone and talk something over then please do; even if you aren't sure how to write something down then I can always include your ideas in Hints and Tips or as a plea for help.

I would be particularly pleased to hear from the people who are using RM computers at home; there are quite a lot of you out there. Some of you will be experienced at working with computers and I would be interested to know why you chose RM for home use. Others will have responded to RM's advertising, perhaps because your children use the same computers at school. How are you getting on with your new machine? Did you have any problems getting started? It doesn't matter if you still don't know the answer to the problem- this is how you'll find out - and it doesn't matter if you think that your problem was trivial; remember that there are many other people who are going to be in exactly the same position as you and will welcome the help that you can give.

If you are writing for me then the ideal is to send me a disc produced using Word or Word for Windows but I can cope with any word processor that runs on a Nimbus (I think). If what you are sending is short then a letter on good old fashioned paper is fine. I can also accept articles left on the bulletin board - the easiest way to to do this is to prepare your article in a word processor and save it normally. You then send a short e-mail to me and attach your file to it when you are on-line. It's actually easier to do than to describe because the whole thing is menu driven.

Finally, we pay for published articles at the rate of £5 per printed page (although all payments are at the Editor's discretion).

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

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Please use capitals

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I enclose a cheque payable to RMUG/order for £15 (£20 for overseas members). If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent.

In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential and we are registered as Data Users under the Data Protection Act.

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